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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,957	11/17/2003	Jiro Moriyama	CFA00047US	4447

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CANON U.S.A. INC. INTELLECTUAL PROPERTY DIVISION
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EXAMINER	
GARCIA JR, RENE	

ART UNIT	PAPER NUMBER
2853	

MAIL DATE	DELIVERY MODE
04/30/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/715,957	MORIYAMA ET AL.	
	Examiner	Art Unit	
	RENE GARCIA JR	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 January 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *27-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *27-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 26 January 2009 has been entered.

Claim Rejections - 35 USC § 112

2. Applicant's arguments, see pages 8 - 10, filed 26 January 2009, with respect to rejection under 35 USC § 112 1st of claims 27-32, 34-35 have been fully considered and are persuasive. The rejection claims 27-32, 34-35 under 35 USC § 112 1st paragraph of 27 October 2008 has been withdrawn.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 27-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al. (US PGPUB 2002/0080396) in view of Tan et al. (US 6,613,403) and Brouhon et al. (US 6,962,450).

Silverbrook et al. disclose the following:

*regarding claims 27, 32, recording apparatus **/netpage printer, 601/** (fig. 11) and method for forming an image on a recording medium**/netpage, 1/** (fig. 1; paragraph 0216 see also paragraphs 0148 and 0218), comprising:

*image processing unit**/printer controller; RIP DSPs, 757/** (Fig. 14; ¶0552, 0554, 0562-0567) configured to create a first recording data**/coded data,3/** (fig. 1; ¶0129, 0565 – coded data/3/ [invisible ink] is the IR layer being processed) by reading pattern data for recording positional information representing positions (¶0158; x & y coordinates) on a recording medium**/1/** and to create a second recording data**/graphic data, 2/** (fig. 1; ¶0129) by reading recording data for recording an image, and synthesize**/rasterize/** (¶0221, 0222, 0392, 0393) the first recording data and the second recording data

*recording control unit**/print engine controllers, 760/** (fig. 14; ¶0554) configured to execute recording of first recording data**/coded data/** and second recording data**/graphic data/** concurrently, based on the synthesized recording data (¶0129, 0554)

*wherein a first black ink**/infrared inks, IR-absorptive black ink/** detectable by a predetermined detector**/netpage pen, 101/** (figs. 8 & 9; paragraph 0255) is used to record the positional information image**/3/** and cyan ink, magenta ink, yellow ink, and a second black ink (paragraph 0243; cyan, magenta, yellow, black), which are undetectable by the predetermined detector**/netpage pen, 101/** (paragraph 0151 – cyan, magenta, yellow, black are non-infrared emitting), are used to record the image

*regarding claims 28 and 33, positional information image**/coded data, 3/** represents positions on the recording medium**/1/** by combining positions of a plurality of spots recorded on the recording medium**/1/** (figs. 6a, 6b & 6c)

*regarding claims 31 and 36, first black ink is a carbon ink (paragraphs 0584 – 0592; infrared dyes/ink/ contain carbon atoms)

*regarding claim 37, computer-readable storage medium storing computer-executable process steps, the computer-readable process steps causing a computer to execute the method of claim 32 (flash memory/658/; fig. 14; ¶0556)

Silverbrook et al. does not disclose the following claimed limitations:

*regarding claim 27, 32, using at least a first recording head for discharging a first black ink and a second recording head for discharging a second black ink

*execute recording of the first recording data by the first recording head and recording of the second recording data by the second recording head concurrently, based on the synthesized recording data

*regarding claims 29 and 34, dots are recorded with reference to virtual lattice points of the recording medium

*regarding claims 30 and 35, first black ink is recorded using a first recording head and the cyan ink, magenta ink, yellow ink, and second black ink are recorded using a second recording head

*regarding claims 31 and 36, cyan ink, magenta ink, yellow ink, and second black ink are carbon- free inks

*Silverbrook et al. does teach utilize color inks however does not expressly specify which recording material composition to utilize

Silverbrook et al. teaches the following:

*regarding claim 27, 32, using at least a first recording head for discharging a first black ink and a second recording head for discharging a second black ink (the use of six colors for printing; including Black, Cyan, Magenta, Yellow and IR-Absorbitve Black ink (carbon); ¶0223, 0243, 0252, 0520; fig. 54) wherein the six colors are ejected via a single printhead with multiple rows or interdigitated printing elements instead of two separate heads; Further Silverbrook et al. teaches the use of existing consumer inkjet and laser printers (¶0135) and wide range of digital printing technologies (¶0228), although not ideal for use, teaches the use; wherein it is understood that consumer printers are capable of using single or plural printhead configurations. Silverbrook et al. further teaches (¶0242) the invention of a new print technology to meet desired characteristics not found in an all-in-one printing technology. Wherein this includes incorporating a plural inks into a single printhead module (¶0243). Applicant further

acknowledges that a person having ordinary skill in the art would make use of using two recording heads without undue experimentation, with respect to the instant applications printing apparatus only disclosing structure specific to a single printhead being utilized, but inferring the use of two print heads, as argued on page 10 of arguments filed 01/26/09; In conjunction with Silverbrook et al. teaching the creation of a single printhead to utilize plurality of inks and applicant's acknowledgment, it would have been within reason for a person of ordinary skill to utilize two print heads, in perhaps a consumer printer.

*execute recording of the first recording data by the first recording head and recording of the second recording data by the second recording head concurrently, based on the synthesized recording data. Further building upon preceding basis, of using two printheads, it is known operation to create recording data for each printhead being utilized, therefore would also be within reason for a person having ordinary skill in the art to have the Silverbrook et al. invention process individual data for each printhead. Further, Silverbrook et al. teaches the rasterization of data received via the netpage server (¶0221, 0222, 0392, 0393) and is known in the art to include the transformation from one format to another format utilized by the specific print engine to do the actual printing of data received via a host pc, netpage server in this instance.

*regarding claims 30 and 35, the use of six colors for printing; including Black, Cyan, Magenta, Yellow and IR-Absorbitve Black ink (carbon) (¶0223, 0243, 0252, 0520;

fig. 54) wherein the six colors are ejected via a single printhead with multiple rows or interdigitated printing elements instead of two separate heads

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize more than one head to provide first black ink, cyan ink, magenta ink, yellow ink, and second black ink since it is known in the art to provide different printhead cartridges for different configurations, or where an array of print elements is distributed via multiple sub-printheads to makeup the whole.

Brouhon et al. discloses the following:

*regarding claims 29 and 34, dots are recorded on virtual lattice points of the recording medium (fig. 2; col. 5, lines 22-45; background information - col. 1, lines 21-39, lines 51-56, lines 61-67, col. 2, lines 1-11)

Silverbrook et al. and Brouhon et al. are analogous art because they are directed to a similar problem solving area of position identifying patterns utilized in conjunction with a primary image.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize dots are recorded on virtual lattice points of the recording medium as taught by Brouhon et al. into Silverbrook et al. for the purpose position identifying of a secondary image.

Tan et al. discloses the following:

*regarding claims 31 and 36, cyan ink, magenta ink, yellow ink, and second black ink are carbon- free inks (col. 9, lines 10-24, particularly line 20) for the purpose of ink detection and lack of detection based on specific properties (infrared detection).

Silverbrook et al. and Tan et al. are analogous art because they are directed to a similar problem solving area of recording material**/ink/** detection and recording material lack of detection.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize cyan ink, magenta ink, yellow ink, and second black ink are carbon- free inks as taught by Tan et al. into Silverbrook et al. for the purpose of ink detection and lack of detection based on specific properties (infrared detection).

Response to Arguments

5. Applicant's arguments with respect to claims 27 and 32 have been considered but are moot in view of the new ground(s) of rejection.

Silverbrook et al. (US 2002/0080396), herein Silverbrook, teaches the claim limitations, as amended. The rejection of the claims above provide the specific details with respect to those limitations. Silverbrook teaches the rasterization of data transmitted from the netpage server, wherein a person having ordinary skill in the art recognizes the process involves translation from one image space to another (i.e. data formatted in one way to a format recognized, and needed, by the specific print engine to do the actual printing, firing of nozzles and translation of medium.); with respect to arguments on pages 11 and 12. Further Silverbrook teaches ability to use consumer inkjet printers, although not ideal, wherein a person having ordinary skill can further extrapolate the use of more than one printhead and thus the creation of first and second

data (synthesized) via a rasterization process, with respect to arguments on page 13. Finally with respect to arguments on page 13 related to Silverbrook failing to teach reading pattern data, the process of rasterization requires the input of data to perform the translation; wherein data would include that related to page layout, including positional and image data.

Communication with the USPTO

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RENE GARCIA JR whose telephone number is (571)272-5980. The examiner can normally be reached on M-F 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. G./
Examiner, Art Unit 2853

/Stephen D Meier/
Supervisory Patent Examiner, Art Unit 2853